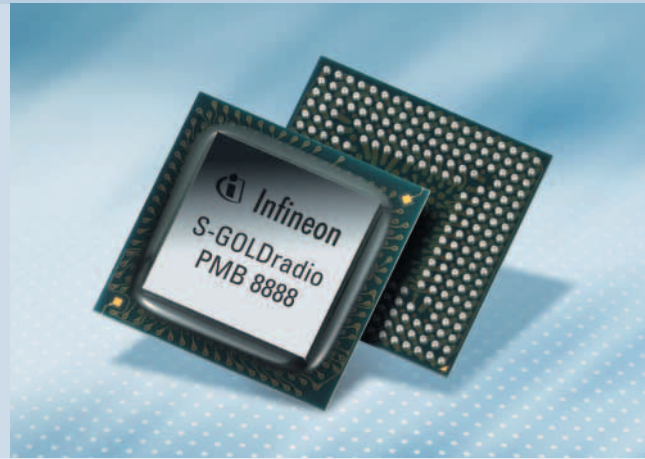


PMB 8888

S-GOLDRadio™ - The World's First
Single-Chip Solution for
EDGE-powered Feature Phones



WITH THE LATEST MEMBER of the S-GOLD® family, S-GOLDRadio™, Infineon Technologies introduces the world's first true single-chip solution for feature-rich mobile phones. The EDGE-capable device monolithically integrates all digital and analog functions of the baseband, a Quadband RF transceiver, and the power management circuitry into one single chip. With an option for memory stacking ("Package on Package", JEDEC compliant), the key functions of a mobile phone are now combined in a single device, providing all the benefits of a maximized level of integration. Full SW re-use from Infineon's proven EDGE platform, MP-E, enables fast time-to-market with a comprehensive development kit being available to all customers today. S-GOLDRadio™ is designed in Infineon's high-performance, low-power 0.13 µm technology. Samples will be available in Q4/06.

BY LEVERAGING its strong track record in CMOS RF, CMOS power management, and mixed-signal EDGE baseband controllers, Infineon Technologies was able to swiftly make this unique device a reality. With E-GOLDRadio™, a GSM/GPRS baseband with integrated RF transceiver, the first radio-integrated baseband entered the market. Also with SM-POWER3™, Infineon made the transition into CMOS-based power management devices adding the last piece to the set of components needed to provide a true single-chip solution.

Key Features

- Baseband
 - ARM926® based single modem and application processor with cache support and fast tightly-coupled memories, running up to 260 MHz
 - GSM/EDGE/GPRS modem functionality supporting up to multislot class 12 and SAIC algorithm
 - Digital camera interface for still imaging up to 2 MPixel
 - Primary and secondary display interface for color displays up to QVGA resolution
 - Video encode in QCIF resolution, 15 fps/video decode in QCIF resolution, 30 fps
 - Video streaming
 - Audio replay in various formats, such as MP3, AAC+, AAC++
 - 64-voices on-chip polyphonic ringer
 - High Java performance with Jazelle Java co-processor
 - Secure boot, secure debug, DRM2.0
 - MMC/SD interface, SDIO enabled
 - USB 2.0 full speed, on-the-go- enabled
 - Dedicated NAND flash controller supporting burst mode and error detection
 - Standardized multimedia extension interface (MMIC-IF) supporting external hardware accelerator ICs such as complex display/camera modules or graphic accelerators
- RF transceiver
 - Quadband transceiver for GSM850/GSM900/GSM1800/GSM1900
 - Direct conversion receiver architecture with four integrated LNAs
 - Digital Sigma-Delta modulator for GMSK, polar modulator architecture for 8 PSK
 - Integrated power control loop for accurate output power setting (TRP), supporting linear and non-linear PAs
 - Fully integrated, low noise RF VCO for quad-band operation
- Power management
 - System voltage regulators based on LDO architecture
 - Highly efficient switched power supplies (2x step-down, 1x step-up converter)
 - Support of comprehensive on-chip standby/power-down circuitry
 - Charger for NiMH and Li-Ion/Polymer batteries including precharge current generator
 - Backlight and LED support
 - Audio amplifier for handsfree operation
 - Vibra motor driver
 - Power-on reset logic

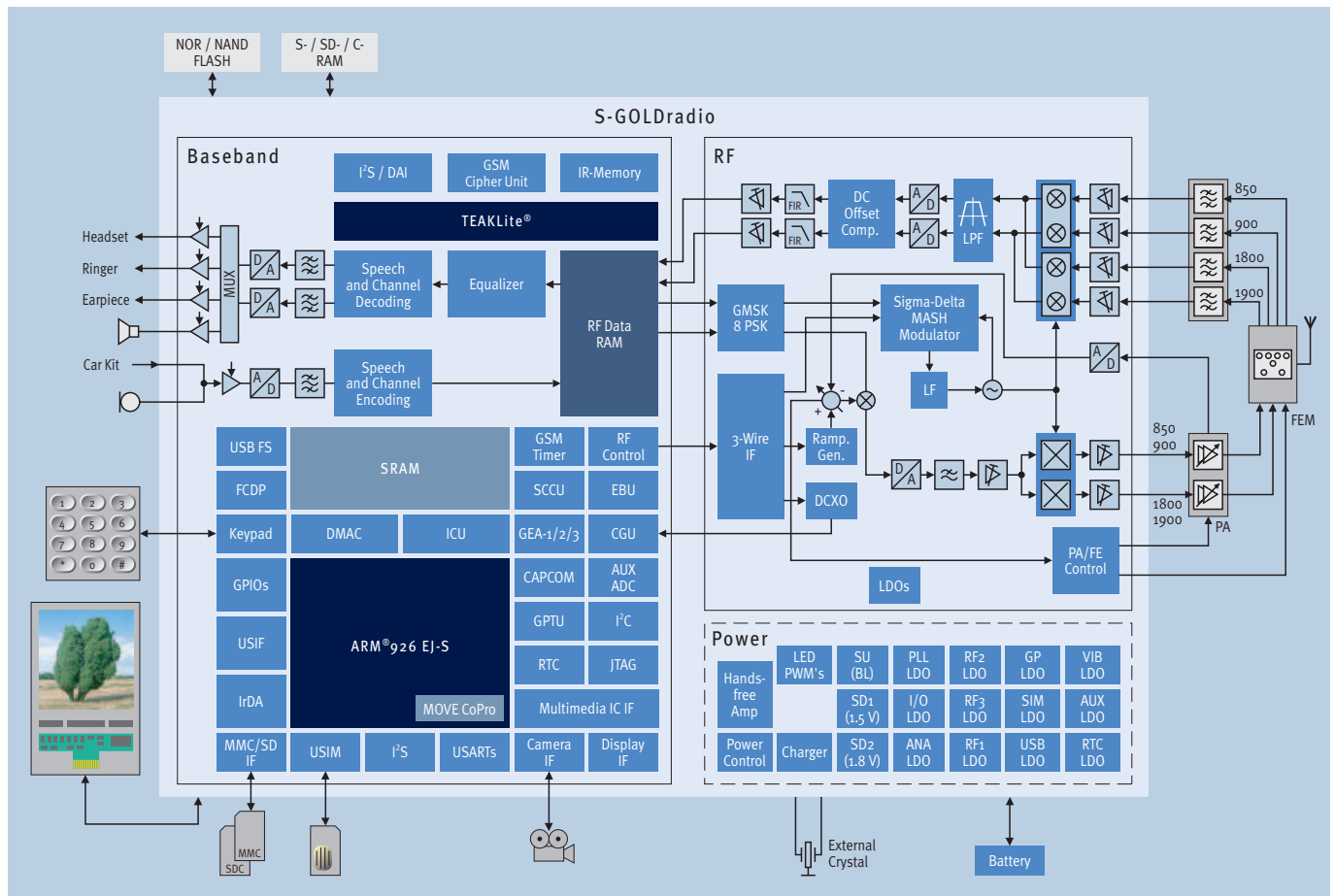
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Never stop thinking

Block Diagram



Target Applications

S-GOLDradio™ is tailored to fit the requirements of EDGE-enabled feature phones with a standard set of multimedia applications such as still picture imaging up to 2 MPixel, MPEG4 video encode/decode, video streaming, MP3 playback and Java applications. The single chip solution allows for very small form factor phones with a high degree of power efficiency. Its low cost structure makes multimedia feature-enhanced EDGE phones very affordable for price-sensitive markets.

THE S-GOLDradio™'s small footprint, competitive price and low power consumption also make it the perfect fit for EDGE-capable data cards.

Software Availability

S-GOLDradio™ is designed with 100% software backwards-compatibility to Infineon's proven EDGE platform, MP-E™, consisting of S-GOLD2™, SMARTi-PM™ and SM-POWER1.6™. Thus a comprehensive SW package is readily available for the S-GOLDradio™-based mobile platform, comprising low-level device drivers, EDGE protocol stack, Nucleus® RTOS, APOXI™ application framework, and a set of reference applications.

*Note: TEAKLite® is a registered trademark of ParthusCeva, Ltd.
ARM® is a registered trademark of ARM, Ltd.*

Key Benefits

The maximized integration level of S-GOLDradio™ provides significant benefits to tackle the challenges of mobile phone manufacturing today:

- Lowest cost of ownership, guaranteed by significantly reduced system cost. A number of cost improvements are achieved using S-GOLDradio, both in the development and the manufacturing process of a mobile phone.
- Minimum space requirements with a PCB area saving of ~50% over conventional 3-chip solutions. Total number of components goes down to <100.
- Lowest power budget with more than 10% savings over comparable 3-chip platforms.

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Information

For further information on technology, delivery terms and conditions and prices please contact your nearest Infineon Technologies Office.

Warnings

Due to technical requirements components may contain dangerous substances. For information on the types in question please contact your nearest Infineon Technologies Office.

Infineon Technologies Components may only be used in life-support devices or systems with the express written approval of Infineon Technologies, if a failure of such components can reasonably be expected to cause the failure of that life-support device or system, or to affect the safety or effectiveness of that device or system. Life support devices or systems are intended to be implanted in the human body, or to support and/or maintain and sustain and/or protect human life. If they fail, it is reasonable to assume that the health of the user or other persons may be endangered.